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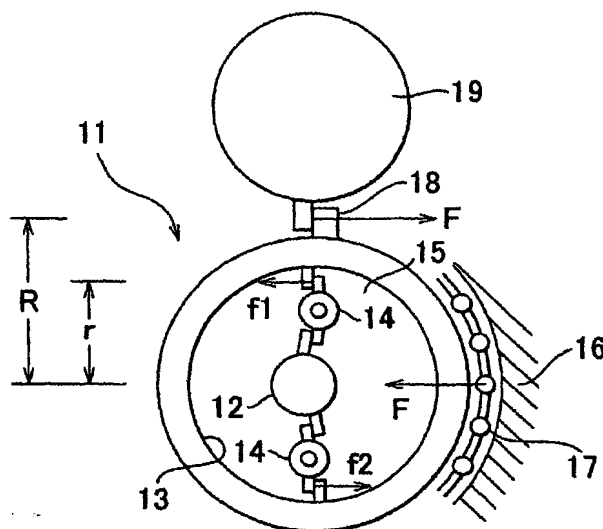
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[Continued on next page]

(54) Title: PLANETARY GEARSET



(57) Abstract: A planetary gearset (11) provided with a sun gear (12), a ring gear (13), and a carrier (15) that rotatably retains a plurality of pinion gears (14) arranged between the sun gear (12) and the ring gear (13) as elements, in which one of the elements is made a fixed element and one of the other elements is made a rotating element, and which transmits torque between that rotating element and an external member provided in a location eccentric with respect to that rotating member, is constructed such that the fixed element (15) is movably retained in the direction of a load from the transmission of torque between the rotating element (13) and the external member (19), and the load from the transmission of torque between the rotating element (13) and the external member (19) is received by a fixed portion (16) that rotatably retains that rotating element (13).

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,
SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN,
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INTERNATIONAL SEARCH REPORT

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 A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F16H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 374 463 A (BONALUMI LUIGI) 27 June 1990 (1990-06-27)	1,2,4-9
Y	column 3, line 7 - column 4, line 19	3,10,11, 21
A	---	12
Y	FR 2 173 486 A (DURAND FRANCOIS) 5 October 1973 (1973-10-05)	3
A	figure 1	1,2
Y	US 6 223 616 B1 (SHERIDAN WILLIAM G) 1 May 2001 (2001-05-01)	10,11
Y	column 5, line 43 - line 50; figure 1	
Y	GB 681 298 A (JAMES WATT ROSS;TARPEN ENGINEERING COMPANY LTD) 22 October 1952 (1952-10-22)	21
A	the whole document	13-20

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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

28 July 2003

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INTERNATIONAL SEARCH REPORT

Intern - Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 315 440 A (CHSZANIECKI SIEGFRIED) 16 February 1982 (1982-02-16) the whole document ---	1,2
A	US 4 136 580 A (BRAND WILHELM ET AL) 30 January 1979 (1979-01-30) the whole document ---	5-9
A	US 3 771 622 A (HYAKUMURA H) 13 November 1973 (1973-11-13) the whole document ---	13-21
A	US 6 223 858 B1 (YONEDA SHINOBU ET AL) 1 May 2001 (2001-05-01) column 1, line 62 -column 2, line 50; figure 3 -----	21

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-9

A planetary gearset whereby one of the sun gear, the ring gear or planet carrier is retained on a fixed portion by an elastic member.

2. Claims: 10-20

A planetary gearset, whereby the bearings of the pinions are lubricated by means of oil paths and an oil sump.

3. Claim : 21

A planetary gearset and two rotating bodies to transfer lubrication oil to a portion at an upper end of the rotating bodies.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internatic

Application No

PCT/IB 02/00075

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